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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,369	01/02/2002	Abdo Esmail Abdo	IBM / 196	9789

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EXAMINER
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WU, YICUN

ART UNIT	PAPER NUMBER
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2175

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DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/039,369

Applicant(s)

ABDO, ABDO ESMAIL

Examiner

Yicun Wu

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

DIANE D. AZRAHI  
PRIMARY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### III. DETAILED ACTION

1. Claims 1-17 are presented for examination.

#### Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated over Beavin et al., (U. S. Patent No. 6,272,487).

As to claims 1, 6 and 11, Beavin et al. discloses a method for estimating statistics on an attribute of a relation, comprising:

forming a histogram of the attribute of the relation, the histogram being augmented to identify the most frequent values of an attribute (col. 7, lines 20-67 and Fig. 6A-6B),

evaluating the histogram in connection with a criterion for retrieval of data from a relation (col. 7, lines 20-67 and Fig. 6A-6B).

As to claims 2, 7 and 12, Beavin et al. discloses a method further comprising:

forming a second histogram of the attribute of a second relation, the second histogram being augmented to identify the most frequent values of the attribute (col. 7, lines 20-67 and Fig. 6A-6B), and

evaluating the histograms to identify frequent values shared by the histograms (col. 7, lines 20-67 and Fig. 6A-6B).

As to claims 3, 8 and 13, Beavin et al. discloses a method further comprising

multiplying frequent values in each of the histograms to produce a estimate of join fanout of a join of the relations on the attribute (col. 7, lines 20-67 and Fig. 6A-6B) and (col. 9, lines 10-25 and col. 11. lines 55-67).

As to claims 4, 9 and 14, Beavin et al. discloses a method further comprising:

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multiplying a number of a frequent value in one the histogram by an estimate of the average number infrequent values in the other histogram ( col. 6, lines 1-67 and col. 7, lines 20-67 and Fig. 6A-6B) and (col. 9, lines 10-25 and col. 11. lines 55-67).

As to claims 5, 10 and 15, Beavin et al. discloses a method further comprising:

computing a number of matching infrequent values in each the histogram by estimating a number of infrequent values in each relation using the histograms, and computing from the estimates the join fanout attributable to the attribute ( col. 6, lines 1-67 and col. 7, lines 20-67 and Fig. 6A-6B) and (col. 9, lines 10-25 and col. 11. lines 55-67).

As to claim 16, Beavin et al. discloses a program product wherein the signal bearing medium is a recordable medium (Fig. 5B).

As to claim 17, Beavin et al. discloses a program product wherein the signal bearing medium is a transmission-type medium (Fig. 5B).

Prior Art Made of Record

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shibamiya et al. (U.S. Patent No. 4,956,774);

Gibbons et al. (U.S. Patent No. 5,870,752);

Lindsay et al. (U.S. Patent No. 6,253,197);

Liu et al. (U.S. Patent No. 6,397,204);

Chen et al. (U.S. Patent No. 6,446,063).

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yicun Wu whose telephone number is 703-305-4889. The examiner can normally be reached on 8:00 am to 4:30 pm, Monday -Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Yicun Wu  
Patent Examiner  
Technology Center 2100

March 10, 2004



DIANE D. MIZRAHI  
PRIMARY PATENT EXAMINER  
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